





Points: 245.49 Rank: 28480



Dashboard > Python > Regex and Parsing > Validating Credit Card Numbers

# Validating Credit Card Numbers



Problem

Submissions

Leaderboard

Discussions

Editorial A

You and Fredrick are good friends. Yesterday, Fredrick received N credit cards from ABCD Bank. He wants to verify whether his credit card numbers are valid or not. You happen to be great at regex so he is asking for your help!

A valid credit card from **ABCD Bank** has the following characteristics:

- ightharpoonup It must start with a 4, 5 or 6.
- ► It must contain exactly 16 digits.
- ► It must only consist of digits (0-9).
- ► It may have digits in groups of 4, separated by *one* hyphen "-".
- ► It must NOT use any other separator like ' ', '\_', etc.
- ightharpoonup It must **NOT** have 4 or more consecutive repeated digits.

#### Examples:

#### Valid Credit Card Numbers

4253625879615786 442442442444 5122-2368-7954-3214

#### Invalid Credit Card Numbers

42536258796157867 #17 digits in card number → Invalid

424444424442444 #Consecutive digits are repeating 4 or more times → Invalid 5122-2368-7954 - 3214 #Separators other than '-' are used → Invalid

44244x4424442444 #Contains non digit characters  $\rightarrow$  Invalid 0525362587961578 #Doesn't start with 4, 5 or 6  $\rightarrow$  Invalid

#### **Input Format**

The first line of input contains an integer N.

The next N lines contain credit card numbers.

#### **Constraints**

0 < N < 100

# **Output Format**

Print 'Valid' if the credit card number is valid. Otherwise, print 'Invalid'. Do not print the quotes.

# **Sample Input**

4123456789123456 5123-4567-8912-3456 61234-567-8912-3456 4123356789123456 5133-3367-8912-3456 5123 - 3567 - 8912 - 3456

## **Sample Output**

Valid

Valid

Invalid
Valid
Invalid
Invalid

## **Explanation**

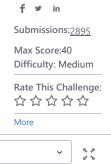
4123456789123456 : **Valid** 5123-4567-8912-3456 : **Valid** 

61234-567-8912-3456: **Invalid**, because the card number is not divided into equal groups of 4.

4123356789123456: Valid

5133-3367-8912-3456 :  $\mbox{\bf Invalid},$  consecutive digits 3333 is repeating 4 times.

5123 - 4567 - 8912 - 3456 : **Invalid**, because space ' ' and - are used as separators.



Current Buffer (saved locally, editable) & 🔈	3 ~	5.3	<b>\$</b>
1			
↑ Hoload Code as File. ☐ Test against custom input	Run Code	Suhmit	Code
<u>♣</u> <u>Upload Code as File</u> Test against custom input	Run Code	Submit	Code